



to weigh and measure

[height, weight and body mass index]

guidance and
recommendations
for schools 2008





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Division of Public Health
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March, 2008

The Wisconsin Partnership for Activity and Nutrition (WI PAN) and the Wisconsin Action for Healthy Kids Coalition (WI AFHK) are pleased to present this document on weighing and measuring children in the school setting.

This document has been developed with the following objectives:

- to help schools to be better informed when making the decision of whether or not to weigh and measure students,
- to provide guidance and policy recommendations to schools that choose to weigh and measure students, and
- to provide resources for schools to create environments supportive of healthy lifestyles.

We would like to thank the individuals who helped to create this document and hope it addresses concerns schools have regarding weighing and measuring students and their role in obesity prevention. We recognize that schools alone cannot address the concerns of overweight and obesity and we encourage all Wisconsin schools to be part of a community-wide approach to assuring the health of children and youth in their communities.

Respectfully,



Susan Nitzke, R.D., Ph.D.
WI PAN Chair



Jill Camber Davidson, R.D., C.D.
WI-AFHK Chair



Wisconsin Action for Healthy Kids is working towards improving school nutrition and increasing physical activity by educating people about the need for policies regarding school wellness policies, nutrition education, competitive food sales and school breakfast programs. The Team provides technical assistance to schools and communities for the development and implementation of school wellness policies promoting healthy eating and physical activity and for increasing the number of School Breakfast Programs in the state. For more information, go to www.actionforhealthykids.org and then click on the state by state action and select Wisconsin on the map or drop down menu.



Lifestyles have changed drastically in recent decades. Physical activity is often not a part of either work or play. In the past we often ate meals prepared at home. Now, while healthful options are sometimes available, endless choices of ready to eat, calorie-laden, mass-produced foods are often accessible to us wherever we go. Such changes have contributed to a health crisis of ever-increasing proportions—an epidemic of obesity that is plaguing not only adults, but also our youngest children.

In 2000, then US Surgeon General, David Satcher, issued a “Call to Action” enlisting partners from every sector of society to combat this growing health crisis (available at: <http://www.surgeongeneral.gov/topics/obesity/>). Schools were included in this directive because they play a large role in the lives of our children. However, the health of our children is a concern for everyone and obesity is a multi-faceted problem. Schools alone cannot address this issue. All levels of society are needed to promote policy changes and interventions that foster appropriate changes in individuals, families, organizations and communities. Promoting regular physical activity and healthy eating and creating an environment that supports these behaviors are essential steps in reducing the obesity epidemic.

This document was developed by an ad hoc workgroup from the Wisconsin Partnership for Activity and Nutrition, or WI PAN, <http://dhfs.wisconsin.gov/health/physicalactivity/index.htm> and the Wisconsin Action for Healthy Kids Coalition, www.actionforhealthykids.org.

This document was written in response to emerging questions such as “Should schools be monitoring students’ weight and height?” and “What is the role of schools in preventing overweight and obesity?”

The purpose of this document is, first, to provide schools with guidance for accurately weighing and measuring children, should they choose to do so. Second, this paper provides schools with policy recommendations that are likely to promote and support healthy lifestyle choices in students, within and beyond the confines of the school building. Schools and communities must work in partnership to create environments that effectively address the problem of overweight and obesity. In this regard, commitment and action are necessary from a variety of partners including:

<i>After-School Program Leaders</i>	<i>School Board Members</i>
<i>Community Coalitions</i>	<i>School Health Advisory Councils</i>
<i>Food Service Directors/Managers</i>	<i>School Health Coordinators</i>
<i>Health Care Providers</i>	<i>School Nurses and Medical Advisors</i>
<i>Parents and Parent Groups</i>	<i>Students</i>
<i>Parks and Recreation Representatives</i>	<i>Teachers</i>
<i>Public Health</i>	<i>Transportation Experts</i>
<i>School Administrators</i>	<i>Youth Recreation Program Leaders</i>

The intended audience for this document includes members of all of the above groups, in addition to all other individuals and organizations with an interest in helping to safeguard the health of Wisconsin residents.



the school's role in promoting health

Schools alone cannot reverse the trends that have led to the current health crisis faced by Wisconsin students. The family's and society's influence on a student's lifestyle habits is more powerful than that of the school. However, by providing an environment that encourages healthy eating and regular physical activity, schools can be an important part of the solution.

To help address the obesity problem, Wisconsin schools and communities are urged to coordinate their school health program efforts and establish local policies and practices, such as those summarized in this paper. Some schools and communities may additionally choose to initiate growth screening for students. One way to do this is in the context of physical education or health classes. In 2007, the Wisconsin Department of Public Instruction (DPI) surveyed lead Physical Education (PE) teachers (DPI, PE Profiles) and found that 41% of schools had collected height and weight or BMI data. Many of those schools reported BMI results to parents and modified their PE curriculum to help students be more active during the school day. In addition, some schools have established special interventions or programs for students whose weight places them at increased risk for poor health.

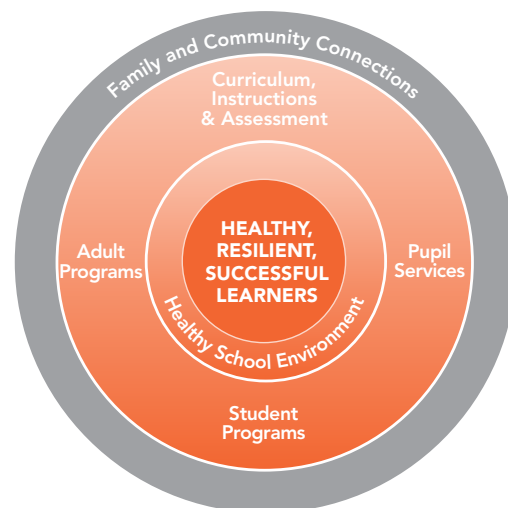
Wisconsin's Framework for Coordinated School Health Program (CSHP)

Healthy kids make better students and better students make healthier communities! This belief is the cornerstone of DPI's Coordinated School Health Program (CSHP) and the reason why organizations and agencies representing public health, higher education, school districts, parents, and other groups have joined DPI in supporting CSHP initiatives. These initiatives address the critical health behaviors that research shows contribute to the leading causes of death and disability among adults and youth, such as alcohol and drug use, tobacco use, lack of physical activity, violence, risky sexual behavior, unintentional injuries, suicide, and poor nutrition. DPI incorporates a variety of strategies to address these critical health behaviors and barriers to learning. Strategies include: funding opportunities; technical assistance; free resources through printed publications, internet, and media resources; and professional development events. You can learn more about these resources and opportunities by visiting program area websites: <http://dpi.wi.gov/sspw/tm-sspwprog.html>.

Effective School Health Programs

Teachers, administrators, and parents want to see all students succeed and become knowledgeable, responsible, caring and healthy adults. The challenge is organizing our educational system to provide the opportunities linked with these outcomes.

Wisconsin's framework for CSHP provides a clear, practical, systematic approach to developing policies, procedures, and activities to improve student health and academic outcomes. The goal of this framework is to promote the health and well-being of students so that physical, emotional, and social problems do not interfere with their ability to become healthy, caring, responsible, and productive citizens.



The Wisconsin framework for CSHP is composed of six components that are used to organize and implement an effective school health program. These components are: 1) healthy school environment; 2) curriculum, instruction, and assessment; 3) student programs; 4) adult programs; 5) pupil services; and 6) family and community connections. These six components form a multi-strategy approach which seeks to address the entire range of youth risk behaviors and promote the health, well-being and positive development of students and other members of the school-community as an integral part of the school's overall mission. A Coordinated School Health Program shouldn't be seen as the responsibility of one person or one committee in a school or district, but represents a collection of school efforts to address various youth risk behaviors and to promote health. The six components of the Wisconsin CSHP Framework are described further in Appendix C.

CDC's Coordinated School Health Program model was the basis for Wisconsin's CSHP framework but it is composed of slightly different components. CDC's CSHP model consists of eight interactive components. These components are: health education, physical education, health services, nutrition services, pupil services, healthy school environment, staff wellness, and family/community involvement. CDC and partners have developed several technical assistance resources to utilize the coordinated school health program model to assess, develop, and implement a school health program. To learn more about this model and technical assistance tools go to www.cdc.gov/HealthyYouth.



deciding whether or not to weigh and measure

As stated earlier, this document was written in response to questions about the schools' role in monitoring heights and weights of students and the schools' role in the prevention of overweight and obesity.

Many factors are likely to be relevant to the decision of whether or not to weigh and measure in schools, such as the availability of an appropriate plan for dealing with weight related concerns, the logistics and costs of collecting accurate measurements, and the development of policies for using data. The following questions and explanations are presented to contribute to this discussion:

Why Would a School Collect Data On Children's Weight And Body Mass Index (BMI) ?

Some schools collect data to serve as a **screening tool** to ensure that a child is developing in a healthy way. Because children's bodies change naturally as they grow, it is important to track height and weight from year to year to follow a child's progress. Screenings also identify individual children who may be obese, overweight, or, less commonly, underweight. Screening results can then be communicated to the family and physician so that they can take appropriate action.

Schools may also use heights and weights as **surveillance data** or to obtain a better understanding of the percentage of children who are obese and overweight. Just as screening data can be used to follow individuals over time, surveillance data can be used to follow groups over time. For example, surveillance data can be used to track changes in the percentage of overweight and obese children in schools or districts over several years. Schools might also use the data to identify the ages at which health interventions are most needed. Surveillance data helps curriculum, program, and policy makers to make informed decisions about how to address the problem of overweight and obesity.

Many schools are collecting height and weight data. This data may be collected by nurses and kept as health records, or may be collected by a physical education teacher and kept as part of a fitness record. Schools can use fitness records as guidance for evaluating the adequacy of their current procedures for weighing and measuring and determining whether or not they are using their data to the fullest extent. Additional information on data collection systems that may be useful for surveillance purposes is found in Appendix F, page 41.

What is Body Mass Index (BMI) and BMI Percentile ?

BMI is a measure of weight for height. It is commonly accepted as an indication of body fatness, especially for adults. BMI can be computed by using either of the following formulas:

$$\begin{aligned} \text{In metric:} & \quad \text{weight in kilograms} / (\text{height in meters})^2 \\ \text{In pounds \& inches:} & \quad [\text{weight in pounds} / (\text{height in inches})^2] \times 703 \end{aligned}$$

Because children are constantly developing, their BMIs change throughout childhood. For this reason the BMI percentile score is used. BMI percentile is determined by plotting a child's BMI for age on a gender-specific growth chart.

How Is BMI Used To Identify Children Who Are Overweight Or Obese¹ ?

BMI percentile roughly estimates whether a child is overweight or obese. All children differ in their body composition, and this varies greatly with stage of development. While an individual child with a high BMI percentile may not necessarily have excess body fat, the vast majority of children with a high BMI percentile (i.e., greater than the 85th percentile) are overweight or obese.

The Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) recommend the use of age-specific BMI percentiles to screen for obesity in children as early as 2 years of age. The Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity (2007) further recommended that physicians and allied healthcare providers perform, at a minimum, a yearly assessment of weight status in all children, and that this assessment include appropriate measurement of height and weight, and calculation of body mass index (BMI) for age and plotting of those measures on standard growth charts. Ideally, the monitoring of growth would occur in a clinical setting with multiple measurements over the course of years and interpreted by trained healthcare professionals. However, we know that some children and adolescents do not have a primary care provider (medical home) or insurance coverage to monitor growth.

¹ For the purposes of this document the term overweight refers to the 85th percentile—<95th percentile BMI-for-age and obese refers to >95th percentile BMI-for-age. This terminology replaces the former terminology of “at risk for overweight” and “overweight” for the same percentile categories, as recommended by the “Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity”.

— Barlow SE and the Expert Committee. Expert committee recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity: Summary report. Pediatrics 2007 Dec; 120:S164. (http://pediatrics.aappublications.org/cgi/content/full/120/Supplement_4/S164).



what concerns exist for weighing and measuring children?

Is BMI measurement the role of the school ?

Some people believe that BMI screening is more appropriately conducted by health care providers. In addition, many are reluctant to take on BMI measurement responsibilities because their resources are tightly stretched due to budget restrictions. There is a significant cost of time and money to appropriately and accurately weigh and measure children. Costs may include resources for hiring and training staff, purchasing equipment, conducting measurements, and analyzing and disseminating results. Screening programs may also require protocols for communicating results to families and providing medical referrals for children with weight-related problems.

Will weighing and measuring children contribute to an already extremely body-conscious society ?

In the 2007 Wisconsin Youth Risk Behavior Survey (YRBS), 59% of female high school students indicated they were trying to lose weight. However, self reported height and weight data from these students show that 20% of female high school students were considered overweight or obese based on their BMI. Providing teens accurate information and letting them know what a normal weight range is may cause them to be more

accepting of their body and offer a sense of relief that they do not have to strive for something else. However, because weight is a sensitive issue; schools planning to conduct growth screenings should have in place effective programs to teach about body image and to prevent bullying and teasing. In addition, pupil services staff at the school should be informed before the screenings take place so they can be accessible and responsive to any needs that may arise among the participating students. DPI has several resources on safe schools and these can be viewed on the department's website at <http://dpi.wi.gov/sspw/safeschool.html>. Also refer to Appendix F for resources on eating disorders awareness and size acceptance.

How can schools ensure that measurements are accurate ?

Persons collecting height and weight measurements need to be trained to assure measurements are taken in a standard way and with appropriate equipment. Detailed guidelines for measuring height and weight are included in this document on pages 14 and 15.

How will you ensure that weighing children will be done in a sensitive manner ?

Weighing and measuring of children should be done with parental notification, in private, and in a non-judgmental manner. Children and parents should be allowed to opt out of weighing and measuring if they are not comfortable with it.

What about special populations ?

Schools may not be able to get accurate height and weight measurements for all students. Some students may not be able to stand erect. Special scales may be needed for obtaining accurate weights for students above 250 pounds. Schools need to decide in advance of the screening how to handle these situations. If it is known before the screening date that accurate measurements will not be able to be obtained, the school may wish to contact parents to see if height and weight data can be collected from another source or if parents wish to opt out of the screening. Similarly, if on the screening day it is determined that accurate screening measurements cannot be taken, the school needs to decide how to communicate this information to parents and to determine whether or not to request data from another source.

In regards to BMI assessment, it should be noted that some students with special needs may have different growth patterns due to a disease or chronic condition. While special growth charts have been developed to assess growth of children with certain conditions, CDC recommends using the BMI charts or other standardized growth charts for all children.

How will parents react to the information ?

Providing parents with the information they need to make informed decisions is the first step in establishing a good relationship with them. Parents need to know before the screening what data will be collected, how it will be collected (e.g., assessment procedures, and protecting student privacy), and how the data will be used. The parents then can make an informed decision about whether or not to include their child(ren) in the screening and be better prepared when their child's results are shared with them.

While there is little evidence available regarding how parents react to weight-related information about their children, the greatest cause for concern is that parents who discover their child's overweight or obesity status might put the child on a strict diet in an attempt to prevent or control weight gain. This approach can create or exacerbate unhealthy eating patterns and has the potential to negatively affect growth and development. Another concern is that parents may be apathetic or angry about weight concerns identified during the screenings. Because the family plays a key role in preventing or managing overweight or obesity, weight-related information must be provided to parents in a clear, appropriate and timely manner and in a way that helps them to take appropriate action.

Will schools be able to provide adequate educational resources to parents ?

Many parents need to learn more about effective ways to promote healthful eating habits and physical activity in their children. The best way a parent can promote healthful eating habits and being physically active is practicing these behaviors as role models for their children. DPI has developed two programs to help parents with this task. Wisconsin's Movin' and Munchin' Schools program, www.movinandmunchin.com, provides innovative and fun ideas on how to get kids and parents eating healthier and moving. The Wisconsin Family Day initiative, <http://dpi.wi.gov/ne/index.html>, is meant to encourage parents to take an active role in their children's lives through eating dinner together regularly. Additional resources for nutrition education and promoting physical activity are available from Wisconsin Action for Healthy Kids, www.actionforhealthykids.org, and Wisconsin Team Nutrition initiatives, <http://dpi.wi.gov/ne/index.html>.

Will the results of screening be used to improve access to programs for children identified as overweight or obese ?

A screening program will not lead to positive changes unless there are sufficient school or community services for follow-up. Children identified as overweight or obese may benefit from professional guidance. However, only a small percentage of children diagnosed with obesity ever receive treatment, partly due to the fact that insurance providers frequently do not cover such services. It will be helpful to identify available referral services, prior to conducting the screening, for children identified as having a potential weight-related issue. The school district medical advisor, local physicians, nurse practitioners or the local public health department may be helpful in determining these resources. Low-income children are at increased risk of obesity and these children may have even less access to appropriate interventions. If such opportunities arise, schools can help advocate that resources to prevent and manage obesity be made available to all children.

Does the school environment address weight in the context of a healthy lifestyle ?

We want our youth to understand the importance of a healthy lifestyle rather than to simply focus on their weight. Therefore, weight must be just one indicator, and the school's environment should support and promote healthy behaviors for all students. This should include athletic facilities and physical activity opportunities. Schools should also provide nutritious meals, have policies that encourage healthful food and beverages, and have nutrition education appropriately integrated into the curriculum. (Strategies are provided in Appendix D.)



guidelines for measuring height and weight

Preparations for collecting BMI in school children

The following should be addressed prior to collecting height, weight and calculating BMI in school children.

- 1** Become familiar with district or school policies and procedures that pertain to student surveys and screening.
- 2** Consider development of a school policy that delineates procedures for the growth screening. It is recommended that this policy be part of an overall Wellness Policy and include the following key elements:
 - a** Parent notification/permission²
 - b** Student information/education
 - c** Procedures for measuring growth
 - d** Child and parent notification of results
 - e** Referral process
- 3** Once the policy is developed it could be presented to and adopted by the school board. Be sure to obtain approval from the District Superintendent, Medical Advisor and all school Principals to assure adequate resources and support. Teachers should also be notified if the screening will be conducted during class time.

² Depending on local policy, this may be accomplished by using a passive consent. This approach uses a general announcement to inform the parents (a newsletter for example). The announcement can direct those parents who do not wish to have their children participate in the height and weight measurements to notify the school (opt out).

Steps to Determine BMI in School Children

1 Determine the measurement setting. Often the heights and weights are collected during physical education class. This setting has several advantages including: a) the scales and stadiometers (height boards) are often located in gymnasiums; b) gymnasiums are generally large enough to ensure the measurements are private; and c) BMI data are often used as part of a physical fitness health report that is generated by the physical education instructors. Alternatively, screening can be conducted more rapidly by measuring children's heights and weights by class throughout the day. The latter approach requires more personnel to conduct the screening and it may interrupt normal class instruction.

2 Obtain the equipment.

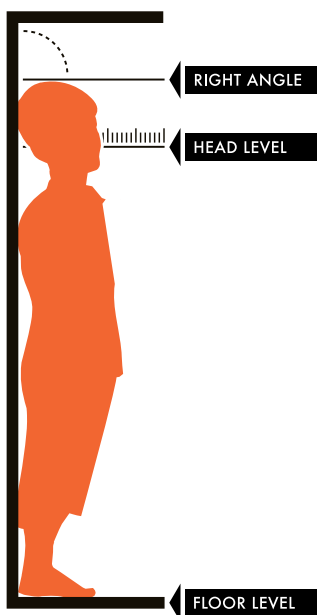
a Scales. Use only high quality, medical-grade, beam balance or electronic scales. These scales should be calibrated ("zeroed") often and periodically serviced. Electronic scales are generally more costly, but they allow for faster weighing. **Do not use home bathroom scales as these are unreliable.**

b Stadiometers (height boards). Stadiometers can be either portable or wall mounted. The stadiometer should be stable and should be checked for accuracy after mounting. If heights are to be measured annually, permanent wall-mounted stadiometers are recommended. Height rods attached to scales do **not** provide reliable measurements.

3 Design the data collection form. The data collection form should include fields to collect the following variables: Student ID, date of measurement, birth date, gender, height, and weight (sample forms are on pages 18 and 19.) These forms may need to be modified depending upon how data will be recorded. Also, for further data analysis it may be beneficial to collect additional information such as county of residence and race/ethnicity.

4 Identify the personnel who will collect the heights and weights. School personnel may want to consider using parent volunteers to assist in collecting the heights and weights. These volunteers should be trained in the measurement procedures, the importance of maintaining confidentiality and the need to allow students to opt out without penalty or shame.

5 Assure persons conducting measurements are appropriately trained. Methods to obtain accurate height and weight measurements follow. These websites provide additional information: www.cdc.gov/nccdphp/dnpa/growthcharts/training/modules.htm (click on Related Maternal and Child Health Modules) <http://depts.washington.edu/growth/module5/text/intro.htm>



a Recording the student's date of birth and date of measurement.

This information is used to accurately calculate the age of the child to the nearest month. The birth date is often available on master lists for classes.

b Measuring heights

- Use stadiometers only.
- Remove the student's shoes and hair accessories prior to height measurements.
- Have the student stand against the stadiometer with heels together, legs straight, arms at sides, and looking straight ahead.
- Place the stadiometer headpiece so it touches the crown of the child's head.
- Read the measurement with measurer's eye parallel with the headpiece.
- Use either metric or English units.
- Read to the nearest .1 cm or 1/8 inch.
- Repeat until two measurements agree within 1 cm or 1/4 inch (the tolerance limit), and record the average of the two. (It is important to take two measurements to assure accuracy in BMI calculations.)
- If unable to obtain an accurate measurement or to obtain measurements within the tolerance limit, document this on data entry form including reason. It is recommended to not include this measurement in aggregate reporting.

c Weighing

- Set up the balance beam or electronic scale in a location that ensures privacy.
- Have the student wear light clothing with shoes removed.
- Have the student stand in the center of the platform.
- Use either metric or English units. Because the metric system is less familiar to most children and adolescents than English units, recording weights in metric may help lessen the student's personal discomfort associated with being weighed.
- Read to nearest .01 kg or 1/2 oz.
- Repeat until two weights agree within .1 kg or 1/4 lb (the tolerance limit), and record the average of the two. *It is important to take two measurements to assure accuracy in BMI calculations.*
- If unable to obtain an accurate measurement or to obtain measurements within the tolerance limit, document this on data entry form including reason. It is recommended to not include this measurement in aggregate reporting.

6 Data entry and analysis

a BMI calculation. In metric, BMI is calculated as: $\text{weight in kilograms} / (\text{height in meters})^2$. In pounds and inches it is calculated as: $[\text{weight in pounds} / (\text{height in inches})^2] \times 703$

b BMI-for-age percentile calculation. For children and teens, BMI is age and sex specific and is often referred to as BMI-for-age. After BMI is calculated for children and teens, it can be compared with Centers for Disease Control and Prevention (CDC) reference data to obtain a percentile ranking. Percentiles can be used to assess the size and growth patterns of individual children in the United States. The percentile indicates the relative position of the child's BMI number among children of the same sex and age. These can be summarized in the categories shown in the chart below. CDC growth charts for determining BMI-for-age percentiles for boys and girls between the ages of 2 and 20 are provided on pages 20 and 21, respectively.

BMI calculation errors can be minimized by using charts or automated calculations. The following link calculates BMI for age percentiles: <http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx>

Details regarding calculating and interpreting BMI can also be found at:

www.cdc.gov/nccdphp/dnpa/bmi/childrens_BMI/about_childrens_BMI.htm

WEIGHT STATUS CATEGORY	PERCENTILE RANGE
Underweight	Less than the 5th percentile
Healthy weight	5th percentile up to the 85th percentile
Overweight	85th up to the 95th percentile
Obesity	Equal to or greater than the 95th percentile

Source: Barlow SE and the Expert Committee. Expert committee recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity: Summary report. *Pediatrics* 2007 Dec; 120:S164.

c Computer Programs for Data entry and BMI calculations. Height and weight data can be entered into a standard spreadsheet such as Excel for BMI calculation. Alternatively, specialized computer programs, such as FITNESSGRAM, often used by Physical Education teachers; Skyward, often used for student record administration; NutStat, part of CDC's Epi Info program, or SPHERE, used by public health nurses, can be used for direct entry and BMI calculation and in most cases, BMI-for-age percentile calculations. See Appendix F for more information about these programs.

d Data analysis. Whether you want to follow individual children or get a broader picture of the BMI status of your school age population may affect what system is used to record heights and weights. See Appendix F for more information.

Dear Parents,

Our school is gearing up to weigh and measure all children in our school to determine how they are growing. The {school nurse, physical education teacher} will conduct this measurement on {date}.

The purpose of this measurement is to monitor the growth and development of children. The screening tool used is the Body Mass Index (BMI) for Age Calculation. This method uses a child's weight relative to his/her height and age. All measures will be taken to safeguard your child's privacy.

If a child is identified as having a weight that may place him/her at a health risk, parents will be notified and referred to seek further assessment by the child's physician.

Body weight and type are sometimes issues of extreme sensitivity for students and families. If you do not wish your child to participate in this screening, please contact {name and phone number}.

Additional questions can be directed to {educators name, role, and phone number}.

— Form Modified from "The Role of Michigan Schools in Promoting Healthy Weight"

sample results letter to parents

XYZ School District

Date: _____

Dear Parent/Guardian:

_____ was measured for height and weight to determine how he/she is growing. A Body Mass Index (BMI) for Age percentile* was also calculated which is used as a guideline to help assess whether a person may be overweight or underweight.

His/her measurements were:

Height: _____ Weight: _____

Body Mass Index-for-Age percentile*: _____

Being either overweight or underweight can put a person at risk for certain health problems. A student who is overweight or obese may have an increased risk of developing serious conditions, including diabetes, heart disease, high blood pressure, stroke and certain cancers. A student who is underweight has an increased risk for heart problems, loss of bone mass, and anemia. Underweight may also be a sign of an underlying eating disorder.

Many factors, including sports participation or family history, can influence height and weight in children and adolescents. **BMI should be considered a screening tool and not a definitive measure of overweight and obesity as the indicator does have limitations.** For example, some athletes and serious dancers may have a higher than expected BMI due to their increased muscle mass, which weighs more than fat mass.

Your child's health care provider is the best person to evaluate whether or not his/her measurements are within a healthy range. Keeping in mind that this is only a health **screening**, please share the results with your child's health care provider, who may suggest changes in eating or physical activity or may have other suggestions.

If you have any questions, please call the school nurse at _____.

Respectfully,

School Nurse

- BMI less than 5th percentile – underweight
- BMI 5th percentile up to 85th percentile – healthy weight
- BMI 85th up to 95th percentile – overweight
- BMI equal to or greater than 95th percentile – obese

height and weight data entry form 1

School Year 20____ – 20____

STUDENT INFORMATION

Name :

ID :

Guardian name :

Address :

STREET	CITY	STATE	ZIP
--------	------	-------	-----

Date of birth :

MM / DD / YYYY

Gender: ☐ Male ☐ Female

Grade :

PRE-K, K, 01-12

Teacher name :

Assessment date :

MM / DD / YYYY

Measurement and BMI Data

Note: Clearly indicate if you are using measurements other than pounds and inches.

If the difference between height measurements 1 and 2 is greater than 1/4 inch re-measure.

If the differences between weight measurements are greater than 1/4 pound, re-measure.

1st Height: ____&____/8th Inches

2nd Height: ____&____/8th Inches

Average of 1st Height and 2nd Height: ____&____/8th Inches

1st Weight: _____.____ pounds

2nd Weight: _____.____ pounds

Average of 1st Weight and 2nd Weight: _____.____ pounds

BMI: _____ BMI-for-Age Percentile: _____

Unable to Assess

Check a reason below if measurement or student data cannot be obtained

- ☐ Absent ☐ Physical disability ☐ Student refused
☐ Parent refused ☐ No longer at this school ☐ Student is pregnant
☐ Could not get two height measurements within 1/4 inch or two weight measurements within 1/4 pound.
☐ Other _____

School Information

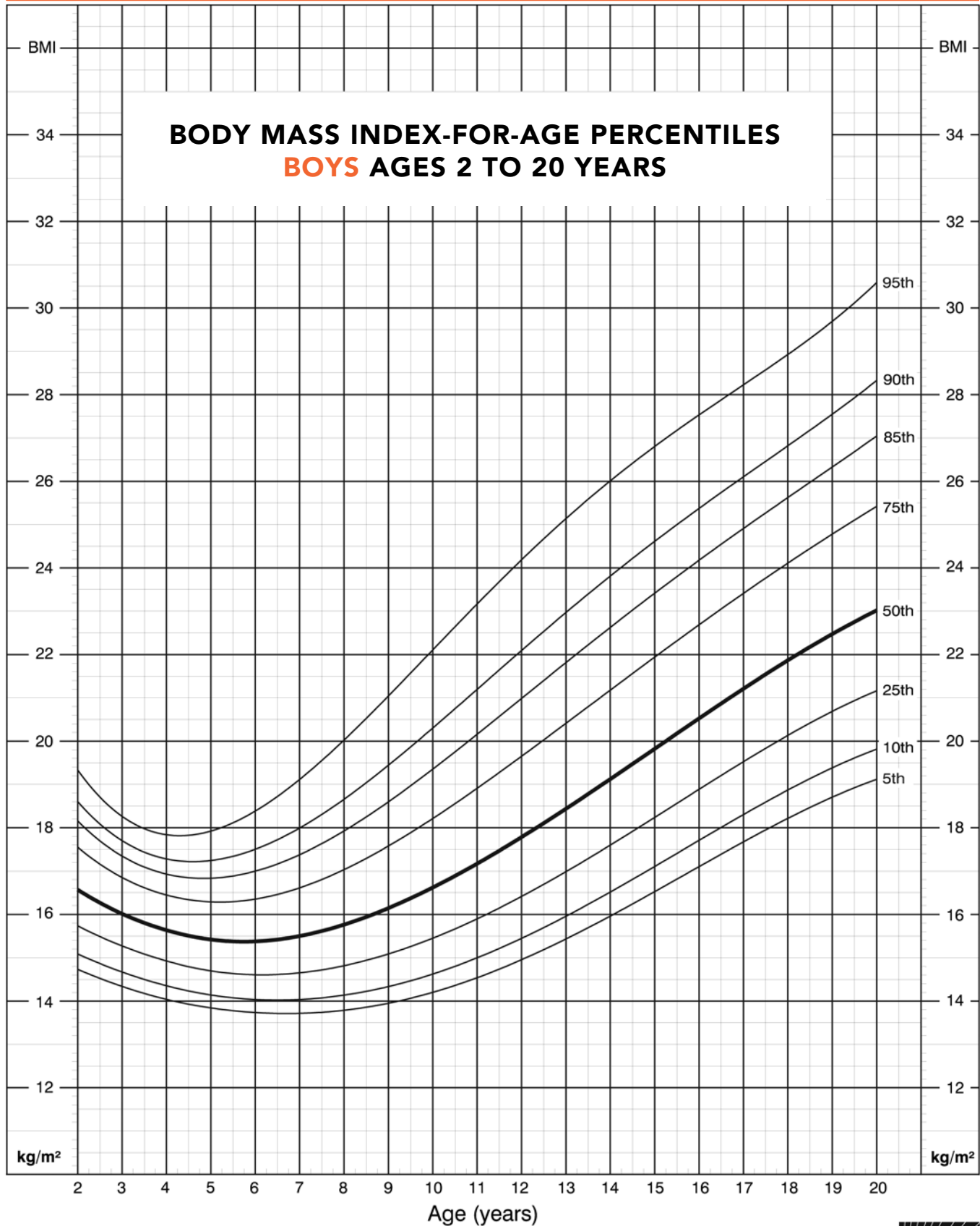
School Name:

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School Year 20____ – 20____

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CDC growth chart: United States



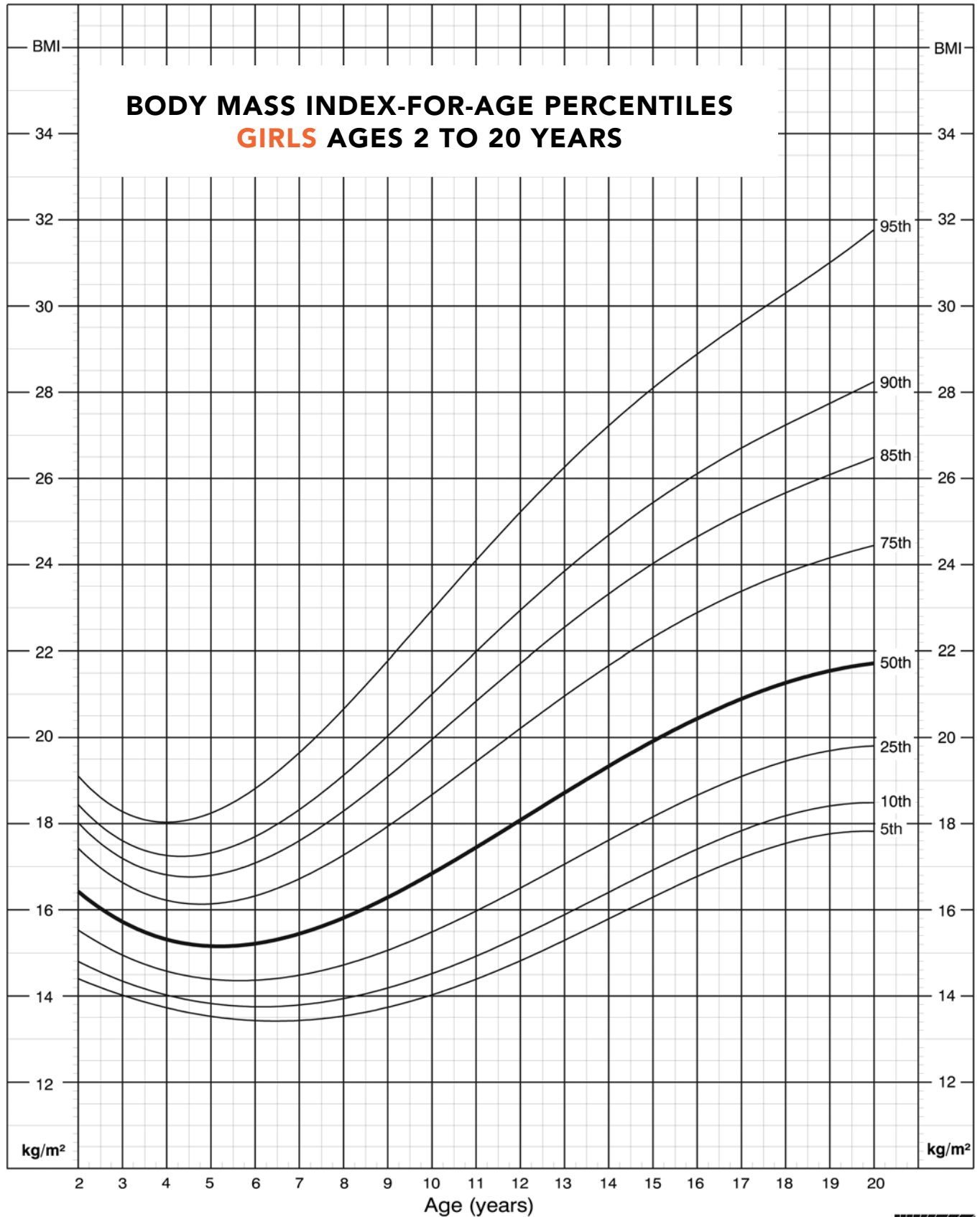
Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



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CDC growth chart: United States



Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



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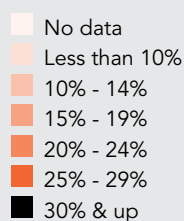
appendix a: the nature of the obesity related health crisis

Rarely does a day go by without a news report on obesity and its complications. Rates of obesity have increased at alarming rates over the past 20 years, both in the nation and in Wisconsin. The latest data from the National Center for Health Statistics (more information available online at: www.cdc.gov/nchs/pressroom/04facts/obesity.htm) show that 30 percent of U.S. adults 20 years of age and older—over 60 million people—are obese. This increase is not limited to adults. The percentage of young people who are obese has more than tripled since 1980. Among children and teens aged 6–19 years, 16 percent (over 9 million young people) are considered obese.

These increasing rates of overweight and obesity are cause for concern because of their implications for Americans' health. Overweight and obese adults are at increased risk of many diseases and health conditions, including: hypertension; type 2 diabetes; coronary heart disease; stroke; gallbladder disease; osteoarthritis; sleep apnea and respiratory problems; poor female reproductive health/polycystic ovarian disease; some cancers (endometrial, breast and colon); and poor birth outcomes.

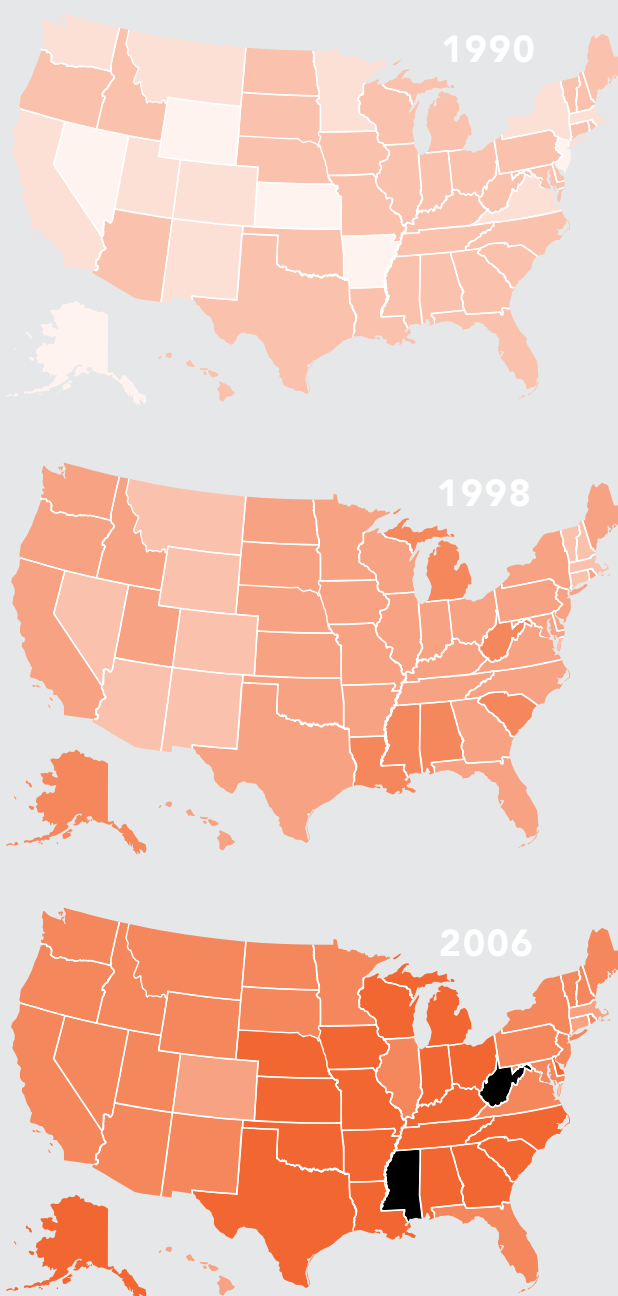
Obesity also presents numerous problems for the child. It takes a toll both in physical health and psycho-social adjustment. Childhood obesity is the leading cause of pediatric hypertension, is associated with Type 2 diabetes, increases the risk of coronary heart disease and increases stress on the weight-bearing joints. Studies have shown that obese children receive less acceptance from their peers and more discrimination from significant adults in their lives, exhibit a greater sense of rejection and failure, have poorer interpersonal relationships, and have limited group and social interests. (Spencer, National Assoc. of School Psychologists).

OBESITY TRENDS* AMONG U.S. ADULTS



*BMI ≥ 30 or about 30 lbs. overweight for 5'4" person

source: CDC Behavioral Risk Factor Surveillance System





current status of obesity in wisconsin — adults

According to the 2006 Behavioral Risk Factor Surveillance System (BRFSS) annual telephone survey conducted by the Centers for Disease Control and Prevention, in Wisconsin, more than a quarter of adults (27%) are obese and almost two-thirds (63%) are either overweight or obese. During the period 1990-2006, the prevalence of obesity in Wisconsin more than doubled (from 11% in 1990 to 27% in 2006).

Obesity prevalence has increased for all age groups in Wisconsin over the past decade. Based on data from the 2004-2006 BRFSS, the age group of 18-29 had the lowest prevalence of overweight and obesity (50%), while the highest prevalence was observed among those 50-59 and 60-69 years of age (71%). Prevalence in other age groups included 64% for those 30-39, and for those 40-49, and 64% for those 70+. There were also disparities between genders. For adults in general, 63% were either overweight or obese; however, 72% of men and 53% of women fell into this category.

Based on the 2004-2006 BRFSS data, racial and ethnic disparities were also observed. For adults 18 years and older, American Indians had the highest prevalence of overweight and obesity (75%), followed by Black (67%) and Hispanics (66%), Whites (63%) and Asians (40%).



current status of obesity in wisconsin — youth and adolescents

Among children 5-13 years of age there is limited data available on overweight and obesity in Wisconsin. According to a 2003-2004 National Survey of Children's Health (NSCH), 13.5% of Wisconsin youth ages 10-17 are obese. The study is based on a survey of parents in each state (www.healthyamericans.org). Some communities and schools have collected weight and height information on this age group as part of special studies or initiatives, but this data is not readily available for statewide surveillance at this time.

However, with respect to adolescents, the Wisconsin Youth Risk Behavior Survey (YRBS) collects self-reported weight and height from 9th-12th grade students. The YRBS is a school-based survey conducted in a representative sample of Wisconsin public high schools. The 2007 YRBS indicated that 14% of Wisconsin 9th-12th graders were overweight and 11% were obese. Of the 25% who were overweight or obese, 29% were male and 20% were female. An average of 2 report periods (2005-2007) was used to look at the prevalence of overweight and obesity by racial/ethnic groups. The highest prevalence of overweight, including obese, was among the Hispanic teens (34%), followed by American Indian (33%), then by Asian (29%), then by Black (26%), and lastly White (23%).



physical activity, physical education, television time, and nutrition

The current health crisis related to obesity did not occur overnight. Obesity and overweight are chronic health conditions. There are a number of factors that play a role in obesity, which makes it a complex issue to address. Overweight and obesity result from an energy imbalance or consuming more calories than are used by the body for daily living, physical activity, and growth in children. How well a person maintains this balance is affected by his/her genes, metabolism, culture, socioeconomic status, behavior, and environment. Because genetic, heritage, culture, and socioeconomic status are beyond the control of schools, behavior and environment are the greatest areas for prevention and management actions. Let's take a closer look at the current levels of physical activity, physical education, television viewing, and nutrition in Wisconsin.



physical activity

The amount of daily physical activity that people obtain during work or school has decreased over time. Children are also pursuing sedentary activities that simply were not available several decades ago, before new technologies offered attractive pastimes that do not involve physical activity.

Regular physical activity and physical fitness make important contributions to one's health, sense of well-being, and maintenance of a healthy weight. Regular physical activity has been shown to reduce the risk of certain chronic diseases, including high blood pressure, stroke, coronary artery disease, type 2 diabetes, colon cancer and osteoporosis. Therefore, it is recommended that adults engage in at least 30 minutes of moderate-intensity physical activity on most days of the week. According to the 2005 BRFSS, 57% of adults (57% of males and 56% of females) said that they engaged in either moderate or vigorous physical activity each week. "Moderate" physical activity refers to activity that causes small increases in breathing or heart rate and "regularly" refers to 30 minutes, 5 or more times per week, while vigorous physical activity refers to activity that caused large increases in breathing or heart rate and regular refers to 20 minutes, three or more times per week.

The Dietary Guidelines for Americans recommend that children and adolescents engage in at least 60 minutes of physical activity on most (5) days of the week. The 2007 Wisconsin Youth Risk Behavior Survey (YRBS) asked 9th-12th grade students about their activity level. From this survey, only 44% of males and 32% of females are meeting this recommendation.



physical education

Information about physical education was also gathered as part of the 2007 YRBS. On average, 34% of students reported that they did not attend a physical education (PE) class. The following chart shows the breakdown in the number of minutes spent exercising or playing sports in PE class.

DURING AN AVERAGE PHYSICAL EDUCATION (PE) CLASS, HOW MANY MINUTES DO YOU SPEND ACTUALLY EXERCISING OR PLAYING SPORTS?

number of minutes	female	male	9th grade	10th grade	11th grade	12th grade	total
less than 10	2.7%	2.2%	2.4%	4.2%	1.5%	1.7%	2.4%
10 to 20	8.3%	5.5%	6.6%	8.2%	10.3%	2.3%	6.9%
21 to 30	16.4%	12.7%	18%	16.7%	14.9%	7.9%	14.5%
31 to 40	14.6%	16.6%	16.5%	22.2%	14.7%	8.2%	15.6%
41 to 50	9.6%	15.0%	16.8%	13.9%	12.3%	6.1%	12.4%
51 to 60	4.2%	6.0%	7.0%	3.7%	5.2%	4.6%	5.1%
more than 60	7.8%	9.5%	9.9%	9.2%	9.6%	5.9%	8.6%

Wisconsin standards for physical education [Wis. Stats. 121.02] require 1.5 credits of physical education, earned over three separate years, for grades 9-12.

television time

National cross-sectional surveys have shown a positive association between the number of hours children watch television and prevalence of obesity. The mechanisms for the relationship between television time and obesity have not been clearly determined. Proposed theories on how media may contribute to childhood obesity include the following:

- The time children spend using the media displaces time they could spend being physically active;
- The food advertisements children are exposed to on TV influence them to make unhealthy choices;
- The cross-promotions between food products and popular TV and movie characters encourage children to buy and eat more high-calorie foods;
- Children snack excessively while using media, and they eat less healthy meals when eating in front of the TV;
- Watching TV and videos lowers children's metabolic rates to such an extent that the rates are lower than those observed during sleep;
- Depictions of eating styles and body weight in entertainment media encourage children to emulate unrealistic role models, possibly leading them to use unsafe weight control or loss diets.

A recent survey of young people ages 8 to 18, by the Kaiser Family Foundation (2005), showed their daily activities accounted for the following hours: watching television – 3 hours, 51 minutes; using the computer – 1 hour, 2 minutes; video games – 49 minutes; and reading – 43 minutes. The survey also reported that the typical American child spends about 44.5 hours per week using media outside of school.

The 2007 Wisconsin YRBS reported that on the average school day 49% of students are watching 2 or more hours of television each day.

While physical activity has been decreasing among children and adults, eating patterns have also shifted. Increased portion sizes, especially in restaurants, availability of convenience foods, availability of sugar sweetened beverages and more meals eaten away from home have increased the likelihood of energy imbalance resulting in weight gain.

The 2005 Dietary Guidelines for Americans recommends consumption of adequate calories within nutrient needs. Some areas of focus include fruit and vegetables, whole-grains, low-fat dairy, energy density and portion size. Refer to www.MyPyramid.gov for more information.

The standard recommendation for daily intake of fruits and vegetables is now 3½ to 6½ cups per day depending on age, gender, and physical activity levels. Available data, based on the older recommendation of 5 servings per day, from the 2005 BRFSS show that only 22% of Wisconsin adults met this recommendation.

From the 2007 YRBS, 18% of 9th-12th graders reported eating five or more fruits and vegetables per day over the last week. Also included were questions related to breakfast, dairy and soda consumption. When asked how many times in the past seven days the student had eaten breakfast, 13% responded that they had not eaten breakfast in the past week and only 36% reported that they ate breakfast every-day. When asked about dairy consumption, 78% indicated that they had consumed 2 or fewer glasses per day in the last 7 days. The recommendation for dairy is ~3 servings per day. Students were also asked how many glasses, cans or bottles of soda were consumed in the past 7 days. 25% of students reported that they drank at least one soda per day and 8% had 3 or more sodas per day.



appendix b: make a difference at your school

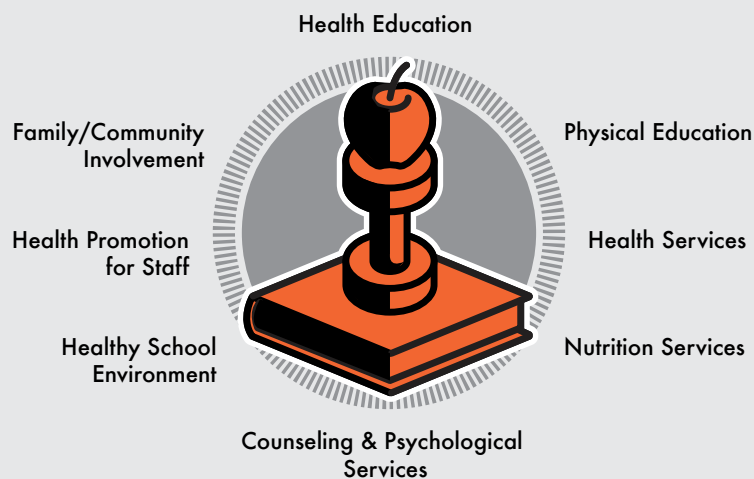
key strategies to prevent obesity

The Centers for Disease Control and Prevention (CDC) reviews scientific evidence to determine which school-based policies and practices are most likely to improve key health behaviors among young people, including physical activity and healthy eating. Based on these reviews, CDC has identified 10 strategies to help schools prevent obesity by promoting physical activity and healthy eating. CDC and its partners have developed user-friendly tools that help schools effectively implement each of the strategies.

1

address physical activity and nutrition through a Coordinated School Health Program (CSHP)

Eight components that can strongly influence student health and learning are involved in a typical CSHP. These components, including health education, physical education, and school meals, already exist in most schools. CSHPs focus on improving the quality of each of these components and expanding collaboration among the people responsible for them. This coordination results in a planned, organized, and comprehensive set of courses, services, policies, and interventions that meet the health and safety needs of all students from kindergarten through grade 12. CSHPs provide a systematic approach to promoting student health and learning that emphasizes assessing programs and policies; planning based on data, sound science, and analysis of gaps and redundancies in school health programming; establishing goals; and evaluation.



Health Is Academic: A Guide to Coordinated School Health Programs.

Developed by the Education Development Center with support from CDC and in collaboration with more than 70 national organizations, this book describes how the eight components of a CSHP can work together to support students and help them acquire the knowledge and skills they need to become healthy, productive adults. It includes CSHP implementation action steps for schools, districts, state agencies, national organizations, colleges, and universities. Available at <http://store.tcpres.com/0807737135.shtml#364>

2

designate a school health coordinator and maintain an active school health council

Establishing a school health council (SHC) is an effective way to achieve an enduring focus on promoting physical activity and healthy eating. SHCs can help schools meet a federal law passed in 2004 that requires all school districts that participate in federally funded school meal programs to establish a local school wellness policy through a process that involves parents, students, school representatives, and the public.

Comprising representatives from the home, school, and community, SHCs establish goals for the school health program and facilitate health programming in the school and between the school and community. Guided by the SHC's vision, a school health coordinator manages and coordinates all school health policies, programs, activities, and resources. SHCs have helped create lasting changes in school environments, such as the adoption of nutrition standards, establishment of student and staff walking programs, the provision of adequate class time for physical education and health education, and the opening of school facilities for after-school physical activity programs.

Promoting Healthy Youth, Schools, and Communities: A Guide to Community-School Health Councils.

This how-to manual offers a practical, 5-step approach to planning, developing, maintaining, and evaluating SHCs. It was developed by a number of CDC partners—originally produced by the Iowa Department of Public Health, it was adapted for use by the American Cancer Society in collaboration with the American School Health Association, the American Academy of Pediatrics, and the National Center for Health Education. www.schoolhealth.info/article.php?a_id=146&sub_dir=36

Effective School Health Advisory Councils: Moving from Policy to Action.

This guide was developed by CDC's partners at the North Carolina Department of Public Instruction to help school district personnel and others develop new SHCs or strengthen existing ones that can effectively support school health policies and programs. www.nchealthyschools.org/docs/advisorycouncilmanual.pdf

3

assess the school's health policies and programs and develop plans for improvement

Self-assessment and planning provide structure to a coordinated school health program in the way that a map provides guidance to a driver. The self-assessment describes where the program is now, and the plan provides the destination and directions to get there. A school health plan is most likely to be effective when it is based on a systematic analysis of existing policies and practices, guided by insights from research, and developed by a school health council that includes teachers, parents, school administrators, students, and the community.

CDC's School Health Index (SHI).

This easy-to-use self-assessment and planning tool enables school health councils and others to analyze the strengths and weaknesses of their school health policies, curricula, and services. The SHI features eight self-assessment modules, each corresponding to one of the CSHP components. Based on their self-assessment, school health teams identify goals and create an action plan tailored for their school. Many schools are incorporating these plans into their overall educational improvement plans. The SHI can be completed using a paper or online version. <http://apps.nccd.cdc.gov/shi/default.aspx>

Body Mass Index Measurement in Schools.

CDC convened an expert panel to review current literature and practices related to BMI Measurement in Schools. This report describes the purposes of BMI measurement programs, examines current practices, reviews existing research, summarizes the recommendations of experts, identifies concerns, and provides guidance including a list of safeguards and ideas for future research. www.cdc.gov/HealthyYouth/overweight/BMI/index.htm

4

strengthen the school's nutrition & physical activity policies

School policies can dictate how often students attend physical education, which items go into school vending machines, which topics and skills are taught in health education, which foods are served in the cafeteria, and much more. School policies directly affect students' opportunities for physical activity and healthy eating and can support the implementation of other strategies listed in this document.

Fit, Healthy, Ready to Learn: A School Health Policy Guide (FHRTL).

Developed by the National Association of State Boards of Education (NASBE) with CDC support, this practical guide helps schools and local school districts establish strong policies on physical activity, nutrition, and other health issues in the context of a coordinated school health program. FHRTL features sample policies that reflect best practice and can be adapted to fit local circumstances; it also includes explanations of the points addressed in the sample policies, and excerpts of actual state and local policies. www.nasbe.org/HealthySchools/fithealthy.html

NASBE also maintains a database of **state school health policies** that can serve as models for new policy development. www.nasbe.org/HealthySchools/States/State_Policy.asp

Wellness Policy Guidance.

Developed in collaboration with the CDC and the U.S. Department of Education, this U.S. Department of Agriculture (USDA) Web site provides information on how to create, implement, and evaluate wellness policies that meet the requirements of federal law. www.fns.usda.gov/tn/Healthy/wellnesspolicy.html

Wellness Policy Tool.

Developed by Action for Healthy Kids in partnership with CDC and USDA, this searchable online database consists of existing or model nutrition and physical activity policies from states and districts around the country. Schools can easily use language from policies in the database to build local wellness policies. www.actionforhealthykids.org/resources_wp.php

5

implement a high-quality health promotion program for school staff

Staff wellness programs provide opportunities for school staff members to participate in health assessments, nutrition classes, physical activity programs, and other health promotion activities. These opportunities can contribute to improvements in physical and mental health outcomes; increases in morale, productivity, and positive role modeling; and decreases in absenteeism and health insurance costs.

Protecting Our Assets: A School Employee Wellness Guide.

Developed by the Directors of Health Promotion and Education (DHPE) with CDC support, Protecting Our Assets is designed to help schools, districts, and states develop comprehensive school employee wellness programs. This resource provides guidance for obtaining program support, developing a school employee wellness team, using existing data to optimize a new or existing program, and implementing policies and practices to support employee wellness. www.dhpe.org

6

implement a high-quality course of study in health education and nutrition

Health education provides formal opportunities for students to acquire knowledge and learn essential life skills that can foster physical activity and healthy eating. Taught by qualified teachers, quality health education includes instruction on essential topics that protect and promote physical, social, and emotional health and safety and provides students with ample opportunities to practice health-enhancing skills. State-of-the-art health education features a sequential curriculum consistent with state or national standards and adequate instructional time. The Wisconsin Action for Healthy Kids coalition has developed a sequential set of recommended guidelines for nutrition education and is compiling curriculum resources to facilitate age-appropriate nutrition education. See <http://dpi.wi.gov/ne/tn.html>

7

implement a high-quality course of study in physical education

Physical education is the cornerstone of a comprehensive approach to promoting physical activity through schools. All students, from pre-kindergarten through grade 12, should participate in quality physical education classes every school day. Physical education not only provides opportunities for students to be active during the school day, but also helps them develop the knowledge, attitudes, skills, behaviors, and confidence needed to be physically active for life.

CDC's Physical Education Curriculum Analysis Tool (PECAT).

This tool enables educators to evaluate physical education curricula based on the extent to which the curricula align with national standards, guidelines, and best practices for quality physical education programs. The PECAT can be used to identify where revisions might be needed in a locally developed curriculum or to compare strengths and weaknesses of published physical education curricula being considered for adoption. For those schools without a physical education curriculum, the PECAT provides a vision of what should be included in a high-quality written physical education curriculum. www.cdc.gov/healthyyouth/PECAT/index.htm

8

increase opportunities for students to engage in physical activity

The school setting offers multiple opportunities for all students, not just those who are athletically inclined, to enjoy physical activity outside of physical education classes: walking to and from school, enjoying recess, physical activity clubs and intramural sports programs, and having classroom lessons that incorporate physical activities. These opportunities help students learn how to weave physical activity into their daily routines.

CDC's KidsWalk-to-School.

This manual provides guidance for schools and communities on how to create an environment that supports safe walking and bicycling to school. It includes educational materials to help promote walking to school and suggests strategies for communities to overcome barriers to walking to school. www.cdc.gov/nccdphp/dnpa/kidswalk

CDC's VERB™ Campaign Materials.

This national, multicultural campaign encourages children ages 9-13 to increase their participation in physical activities. The VERB™ Campaign has a variety of colorful educational materials that schools can use to help promote physical activity among youth. www.cdc.gov/youthcampaign

9

implement a quality school meals program

Each school day, millions of students eat one or two meals that are provided as part of the federally funded school meals program. These meals have a substantial impact on the nutritional quality of students' overall dietary intake and provide a valuable opportunity for students to learn about good nutrition. CDC supports the efforts of the USDA to ensure that meals served through the National School Lunch Program and School Breakfast Program are safe, nutritious, and balanced.

Changing the Scene: Improving the School Nutrition Environment.

This USDA Team Nutrition tool kit, developed with technical assistance from CDC, provides guidance and ready-to-use resources designed to help schools implement a comprehensive and consistent approach to promoting healthy eating among students. The kit addresses the entire school nutrition environment and includes guidance on serving and marketing quality school meals in a pleasant eating environment. Many other school meal guidance tools are available from the Team Nutrition website. <http://teamnutrition.usda.gov/library.html>

10

ensure that students have appealing, healthy choices in foods and beverages offered outside of the school meals program

Most schools offer foods and beverages to students through a variety of channels outside of the federally regulated school meals program: vending machines, school stores, concession stands, after-school programs, fundraising campaigns, and class parties. These offerings have dramatically increased student access to high-fat or high-sodium snacks and non-nutritious, high-calorie beverages. Although federal regulations on these foods and beverages are limited, many states, school districts, and schools are establishing strong policies and innovative marketing practices to promote the sale of healthier foods and beverages.

Making It Happen: School Nutrition Success Stories.

This resource, developed by CDC and the USDA's Team Nutrition with support from the U.S. Department of Education, describes six strategies that schools have implemented to improve the nutritional quality of foods and beverages offered on campus. It also tells the stories of 32 schools and school districts across the country that have successfully implemented these strategies. www.cdc.gov/healthyyouth/nutrition/Making-It-Happen/about.htm

appendix c: wisconsin's coordinated school health program components

healthy school environment

A healthy school environment includes the culture and climate that exists within a school that supports the physical, mental, emotional, and social well-being of all its members. The school environment is vital to supporting the health of students and staff. A clear vision and mission of what embodies the school's values and purpose regarding the health of children gives shape to the healthy school environment. Examples include:

- A school vision and mission statement that recognizes and articulates a role for schools in supporting the health of children;
- Policies and practices which clearly are designed to support the health of students and staff; and
- Providing opportunities for students and parents to get involved and shape the decisions that affect school life.

Contributions

The healthy school environment is not a program but a result of all the experiences that impact on the school. The environment is built through the everyday business of school life. A healthy school environment goes beyond the classroom and includes the playground, hallways, school bus, and any school interaction or activity. It is shaped and created by all those who interact in this environment including students, teachers, administrators, coaches, pupil services staff, parents, custodians, secretaries, teacher aides, bus drivers, cooks, and visitors. The healthy school environment is uniquely interrelated and connected to an effective learning environment. Probably the best indicator of a healthy school environment is that the students and adults alike feel like they belong and want to be at the school.

curriculum, instruction, and assessment

Curriculum, instruction, and assessment involve planning and implementing a sequential and developmentally appropriate PreK-12 curriculum that addresses important health and safety issues. The curriculum transcends any one single discipline to be delivered in an integrated, multidisciplinary approach. Curriculum benchmarks and instructional methods should move beyond the acquisition of content knowledge to teach and assess for skills such as critical thinking and decision making, refusal and negotiation skills, accessing accurate information, self-management and advocacy. Without the application of content knowledge to health skills, students will struggle to meet benchmarks.

Instructional and assessment methods need to help students develop relevant health skills and a commitment to life long health and safety. For example, role plays may be used to help youth practice and assess their ability to demonstrate refusal skill. The role plays used should fit the norms and values of the students, allowing them to assess their ability to use that skill in daily life in a variety of real-life situations. In other words, the instructional and assessment methods are performance-based and connect classroom content and skills to students' lives outside the classroom. Such methods help

students understand the challenge of adopting health promoting behaviors and assess their ability and willingness to do so.

Contributions

Teaching is the most basic function schools provide. Inclusion of health and safety issues in the curriculum is fundamental evidence the school believes that addressing health issues is as important as reading, writing, and arithmetic. In addition, when included in the curriculum delivered by all teachers, rather than only by specialists, it increases students' opportunities for developing health-promoting behaviors. More indirectly, the manner in which the curriculum is provided and learning assessed contributes to a school environment that communicates high expectations for all students.



pupil services

Pupil services is defined as the four core disciplines of school counseling, school nursing, school psychology, and school social work. They are organized as a collaborative team with a systematic procedure to plan the management and coordination of the various student services programs and other system-wide activities that impact student learning. This component:

- Consists of multilevel strategies that include services to individual students and various school programs, and assisting in the improvement of systems that affect children's learning and development;
- Is accessible and responsive to all students across age and grade, and serves the physical, emotional, social, and mental health needs of children; and
- Interfaces with families, community agencies, and other school staff to collaboratively address student needs.

Examples of this component include multi-disciplinary, building consultation, and crisis intervention teams; liaison activities between schools, families, and the community; implementation of the Wisconsin Developmental Guidance model; individual counseling and support groups; and program development.

Contributions

Contributions of the pupil services team are based upon advanced training and preparation specific to the physical, emotional, social, and mental health developmental needs of children within the context of the educational system. Strategies provided are broad-based (families, schools, and communities) and designed to help strengthen the connections between the other CSHP framework components. Pupil services staff function as a liaison between classroom teachers, families, and community resources to meet the needs of children. They possess the training, preparation, and program development skills to anticipate and plan for the future system needs of children (e.g., alternative education).



student programs

Student programs are selected by or provided to students based upon specific student needs or preferences related to their health, development, and interest. There are a number of elements to this component of the framework.

- Participation is voluntary and open to all students with specific preferences or needs. Students apply and develop knowledge and skills which transcend personal gain or benefit through leadership, contribution to the school-community environment, and support of fellow students.
- A strong focus is on developing life skills, mutual support and assistance, and alternatives to risk behavior.
- Activities and services stress relationships with other students and adult role models, in pairs, small groups and large groups. Adults help facilitate these interactions.
- Examples of student programs include student assistance programs (SAPs), peer programs, mentor programs, and clubs and activities which focus on prevention, health, and wellness before and after school and during the school day.

Contributions

Student programs can help address students' physical, emotional, social, and cognitive needs which are foundations for life-long health, learning, and success. They help students connect to the school and community. Students experience the value of working to achieve goals beyond personal, self-centered needs and being perceived as a resource and role model to other students. Adults are able to interact with students in a less structured, less directive manner. Early intervention with students in such group settings can be done much more efficiently than individual services.



family and community connections

Family and community connections consist of the various formal and informal working relationships between schools, families, and the greater community to coordinate, cooperate, and collaborate on health and prevention issues. One of the key ingredients to successful family and community connections is an understanding that working together is a two-way street. All parties should have a common understanding of shared responsibilities and goals consistent with the task at hand. This CSHP component is very different from other components in that it consists of relationships rather than programs and services. These relationships provide the essential community context and support system for the school-community's efforts to promote the health and well-being of children. For example, school personnel can participate on county adolescent health councils and in youth detention program planning. Likewise, community health care providers can be part of the school planning process for the delivery of school health services. This type of two-way planning helps to ensure that school and community programs for youth are complementary.

Another aspect of family and community connections is linking with other community institutions. For example, state law requires children attending school to be immunized. Connecting with the local health department to offer immunizations at the school keeps children in school, helps parents comply with the law and reinforces the message from the school and community that the health of children is important. The goal is to connect different systems and possibly create new ones.

Contributions

In the majority of Wisconsin's school districts, the school is the focal point of the community. Often-times, the school district is the community's largest employer. So, without community support for school programs and activities, success is difficult, if not impossible to achieve. Messages youth receive from the community can inhibit or enhance the school's efforts in prevention, wellness, and youth development. For example, if the school has an AODA curriculum and student AODA programs, then the message from the community about alcohol and drug use must be consistent or the impact of the school program can be significantly diminished.



adult programs

Adult programs provide information and support to adults directly involved in the care and education of students. Elements of adult programs include:

- Continuing education opportunities for staff, parents and caregivers, and interested community members.
- Programs and strategies which specifically target and involve parents and caregivers in a variety of ways. Examples include parent education and training as discussed above, support groups, parent networks, participation in advisory groups, parent-teacher organizations, and instructional and program support that assist parents in understanding and dealing with various health issues facing children.
- Employee assistance and wellness programs.

The true challenge for schools when developing their adult programs lies in identifying the needs and means to motivate all adults to get involved in meaningful health promotion and increased parent involvement.

Contributions

Staff development, parent education and training, and community education provide the necessary knowledge and skills for people to fulfill their roles as prevention agents for children. A range of parent programs and strategies can offer parents and caregivers opportunities to be service providers and advocates as well as consumers. Parent involvement with the school models congruent behavior for the child in his/her two most important environments and is the single best predictor of school success. Employee assistance and wellness programs support adults so they can support children. Healthy adults who manage the stressors in their lives well are able to model the behaviors we hope youth will adopt as their own.

appendix d: what works in schools

Schools provide a unique setting to improve physical activity and nutrition habits. School activities should be integrated with other community groups to have an even greater impact. As school time gets tight with competing priorities, schools need to protect the often overlooked value that physical activity and nutrition play in the overall success of students.

where to start

- 1 Make the connection with community activities to strengthen buy-in. Examples include:
 - Join or form a local coalition to address nutrition and physical activity in a coordinated manner.
 - Integrate school activities with community, business and healthcare initiatives. Form partnerships with community organizations to support or develop programs. Tie into existing promotions, media campaigns and special events (i.e. walk-to-school day, Governor's Challenge, etc).
 - Set-up a school plan that ties into summer programs and other initiatives for year round activity.
- 2 Complete the School Health Index assessment. <http://apps.nccd.cdc.gov/SHI/Default.aspx>
- 3 Apply for the Governor's School Health Award. www.schoolhealthaward.wi.gov
(Some components to win the award are proven strategies).
- 4 Use the local school wellness policy (Child Nutrition Reauthorization Act 2004) to guide physical activity and nutrition policy changes, including establishing nutrition standards for foods and beverages offered in school vending machines, school stores, a la carte lines and on campus.
- 5 Join or help form a School Wellness Council to ensure a comprehensive school health program.
- 6 Provide a staff wellness program and train teachers on healthy eating and physical activity concepts.
- 7 Integrate nutrition and physical activity instruction into lesson plans for multiple school subjects; link curriculum to school food service, teacher, and family involvement.
- 8 Ensure that all school meals meet USDA guidelines and are appealing to students.
- 9 Provide student health services including health information, screening, and referrals.
- 10 Begin working with pre-adolescent children; interventions targeted towards this age group are more likely to have a lasting impact.

suggested intervention/program strategies

Experts agree that the causes of childhood overweight are multidimensional. To address this, the following page outlines strategies representing the existing evidence for change at the individual, environmental, and policy levels based on six focus areas that CDC has outlined for overweight and obesity prevention. Effective interventions are intense, longer-term and employ both nutrition and physical activity strategies. Use these to help design interventions or programs in a school environment.

CDC Evidence-Based Focus Areas:

Increase fruit and vegetable consumption
Decrease sweetened beverage consumption
Decrease food portion size (portion control)
Increase physical activity
Decrease TV and other “screen” time
Increase Breastfeeding

Evidence Level for Each Strategy (listed below)

Items with **red** numbers are proven strategies.

Items with **black** numbers are promising strategies.

Items with **gray** numbers are expert opinion strategies.

nutrition strategies

Fruit and Vegetable Consumption

- 1 Increase healthy food options in lunchrooms, a la carte, vending and school stores; make options appealing.
- 2 Reduce or eliminate foods of minimal or low nutritional value that are sold on campus; limit access, portions, or hours of sale.
- 3 Use peer-to-peer marketing strategies to promote healthier food choices.
- 4 Use point of decision prompts to highlight fruits and vegetables.
- 5 Provide taste testing opportunities to introduce new fruits and vegetables.
- 6 Teach food preparation skills.
- 7 Use competitive pricing; price non-nutritious foods at a higher cost.
- 8 Increase availability of fruits and vegetables; incorporate student preferences (i.e. salad bar).
- 9 Start a school fruit and vegetable garden.
- 10 Use farm-to-school initiatives to incorporate fresh, locally grown produce into meals.

Sweetened Beverage Consumption

- 1 Increase healthy food options in lunchrooms, a la carte, vending and school stores; make options appealing.
- 2 Reduce or eliminate foods of minimal or low nutritional value that are sold on campus; limit access, portions, or hours of sale.
- 3 Use peer-to-peer marketing strategies to promote healthier food choices.
- 4 Use of point of decision prompts to highlight healthier alternatives.
- 5 Make water available; promote consumption.
- 6 Modify vending contracts to increase healthy choices; identify alternative revenue sources needed to replace existing incentives schools receive from current sales.
- 7 Use competitive pricing; price non-nutritious foods at a higher cost.
- 8 Reduce or eliminate food advertising of non-nutritious foods.

Portion Control

- 1 Set age-appropriate serving sizes for foods and beverages available in the school.
- 2 Incorporate portion-size estimation into age-appropriate curriculum (i.e. math).
- 3 Label food to show serving size and calories.

Breastfeeding

- 1 Provide an appropriate place for breastfeeding.
- 2 Adopt policies that support breastfeeding.
- 3 Provide age appropriate education on breastfeeding integrated into academic curriculum (i.e. biology, psychology, etc.).

TV and Food Advertising

- 1 Reduce or eliminate food advertising of low nutrient foods in the school and in school-based TV Programs (i.e. Channel One).
- 2 Limit TV viewing during school meals/snacks.
- 3 Use school-based curricula to teach adolescents media literacy.

Other Nutrition Strategies

- 1 Provide age-appropriate, comprehensive nutrition education at each grade level.
- 2 Provide sufficient time for students to eat during meal times.
- 3 Ensure school fundraising supports student health; encourage sale of non-food items or healthier foods.

physical activity strategies

Physical Activity

- 1 Make sure that school physical education (PE) meet, at a minimum, the State requirements and standards.
- 2 Institute school policies that increase activity. Examples include:
 - PE Curriculum emphasizes active time (track actual time students are active)
 - PE Curriculum emphasizes lifetime activities (e.g. Physical Best)
 - PE Curriculum has proven benefits (i.e. CATCH, Planet Health)
 - Fitnessgram or standards-based evaluation
 - Active recess
 - PE Homework and extra credit are used to supplement PE time
 - Walking or biking vs. school busing
 - Safe Routes to School Program
- 3 Allow maximum access to recreation facilities.
 - Offer and encourage participation in after school sports or intramurals
 - Allow after school and evening access to school recreational facilities
- 4 Institute environmental changes to increase activity. Examples include:
 - Walking school bus
 - Physical activity integrated into other classes
- 5 Set up programs that have strong support systems and incentives. Examples include:
 - Buddy or "team" physical activity goals
 - Programs that involve child and family
- 6 Provide established programs that increase activity such as Movin' and Munchin' Schools.

appendix e: additional wisconsin resources

Governor's School Health Award

The award recognizes and celebrates schools with policies, programs, and the infrastructure to support and promote healthy eating; physical activity; alcohol-, tobacco-, and drug-free lifestyles; and parental and community involvement. The goal of this award is to motivate and empower Wisconsin schools as they create and maintain healthy school environments. To find out more about the program, please visit the School Health Award page: www.schoolhealthaward.wi.gov. This website also provides access to multiple national and state resources to help develop healthier schools and healthier students.

Movin' and Munchin' Schools

Movin' and Munchin' Schools takes an innovative approach to the problem of poor nutrition choices and lack of physical activity among school children. The program encourages schools to develop creative strategies to promote healthy eating and increased physical activity among students and their families. Individuals earn "Movin' and Munchin' Miles" for various physical activities and wise nutrition choices.

All schools that participate will be considered for awards of up to \$500 to use for improving their nutrition and physical education programs.

If your district has a WEA Trust health plan, you are eligible for an additional benefit. If at least 50% of your staff also participates in Movin' and Munchin' Schools, the WEA Trust will match awards given by DPI. The award must be used to encourage other physical activity or healthy eating among your staff and students. <http://movinandmunchin.com>

Worksite Wellness Resource Kit

The Worksite Wellness Resource Kit is a tool to assist worksites with implementing strategies that have been proven to be effective. The kit provides information to implement a broad range of strategies or programming: some will require very little or no resources while other strategies may require considerable resources. The kit shows you ways to get started and make a difference in the health of your employees, regardless of the size of your worksite and its available resources. <http://dhfs.wisconsin.gov/health/physicalactivity/Sites/Worksitekit.htm>

What Works in Worksites

Worksite wellness programs that support employees and the environment that they work in have been shown to be a good return on investment. Program returns range from 2 to 10 times the cost of the program when important factors such as health care costs and productivity are evaluated. Worksite wellness programs can be extensive and sometimes expensive. However, there are ways for even small employers to make positive changes at little or no cost.

What Works in Worksites is a companion document to the Worksite Wellness Resource Kit. This two-page summary of evidence-based and promising strategies focuses on helping people eat healthier and be more active in the work place. <http://dhfs.wisconsin.gov/health/physicalactivity/Sites/Worksitekit.htm>

Got Dirt? Garden Initiative

In an effort to increase fruit and vegetable consumption in Wisconsin, the Department of Health and Family Services' Nutrition and Physical Activity program developed "Got Dirt?" — a program designed to assist with the implementation of school, community, and child care gardens.

Never gardened? The Got Dirt? Garden toolkit is designed to provide simple, step-by-step plans for starting a garden. Even better...tips from garden experts and garden success stories from around Wisconsin are also included. <http://dhfs.wisconsin.gov/health/physicalactivity/gotdirt.htm>

Safe Routes to School

This toolkit contains everything your community needs to get started with a Safe Routes to School (SRTS) Program and increase the number of children walking and biking to school and find solutions to traffic problems near your schools. The content for this toolkit came from international, national and most importantly, Wisconsin SRTS Programs and leaders. The advice, expertise and experience of the SRTS leaders in Wisconsin and across the country helped shape this document. www.dot.state.wi.us/localgov/aid/saferoutes-toolkit.htm

appendix f: web links to resources

wisconsin specific

Wisconsin Nutrition & Physical Activity Program <http://dhfs.wisconsin.gov/health/physicalactivity>

Wisconsin Department of Public Instruction

Team Nutrition <http://dpi.wi.gov/ne/tn.html>

Student Services Prevention and Wellness <http://dpi.state.wi.us/sspw/cshp.html>

University of Wisconsin Cooperative Extension Offices www.uwex.edu/ces

Governor's School Health Award www.schoolhealthaward.wi.gov

Governor's Council on Physical Fitness and Health www.fitness-health.wisconsin.gov

data collection and analysis

Nutstat

Department of Health and Human Services (DHHS) Centers for Disease Control and Prevention (CDC) Epidemiology Program Office Division of Public Health Surveillance and Informatics Epi Info/NutStat.

NutStat is a nutrition anthropometry program that calculates BMI, BMI percentiles and Z-scores using the 2000 CDC growth reference. NutStat is a component of Epi Info, a public domain microcomputer program for handling public health data. Data can be entered per individual or imported from a file. Individual BMI-for-Age Percentile graphs and notification letters can be generated. This application can be used to analyze data and create output reports. www.cdc.gov/epiinfo

FITNESSGRAM

Health-related fitness assessment program for schools. Includes BMI calculation and reports. www.fitnessgram.net

The President's Challenge

Includes online BMI assessment. www.presidentschallenge.org

Skyward

Wisconsin Based Student, Finance and Human Resources Administrative software for K-12 school districts — public and private. It includes a health module and BMI calculation. www.skyward.com

Wisconsin Online Youth Risk Behavior Survey

<http://dpi.wi.gov/sspw/oyrbsindex.html>



health and nutrition information (and other)

American Medical Association

Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity
www.ama-assn.org

Action for Healthy Kids

Nationwide initiative to create health-promoting schools that support sound nutrition and physical activity as a part of a total learning environment.
www.actionforhealthykids.org

Alliance for a Healthier Generation-Healthy Schools Program

The Alliance for a Healthier Generation is a partnership between the American Heart Association and the William J. Clinton Foundation formed to fight childhood obesity. The Healthy Schools Program has tools for schools and has goals to: Increase opportunities for students to exercise and play; put healthy foods and beverages in vending machines and cafeterias; and Increase resources for teachers and staff to become healthy role models.
www.HealthierGeneration.org

American Academy of Pediatrics

www.aap.org

American Dietetic Association

Find a Registered Dietitian in your area to provide expert nutrition counseling, medical nutrition therapy, and weight management interventions.
www.eatright.org

The Body Positive

Purpose is to help people create personal and social environments where they can cherish their bodies and pursue life goals of fulfillment and self expression. Educational materials for teens are available for purchase.
www.thebodypositive.org

Fruit and Veggies: More Matters™ Web Site

Includes information on easy ways to add more fruits and vegetables into your daily eating patterns, links on information for health professionals, publications and partner web sites.
www.fruitsandveggiesmatter.gov

Center for Weight and Health

University of California, Berkeley
<http://nature.berkeley.edu/cwh/index.html>

Council on Size and Weight Discrimination

www.cswd.org

Dole Super Kids Program

(Formerly 5-A-Day for Kids Program)
Provides free educational materials to all elementary schools and special education classes, as requested by individual teachers.
www.dolesuperkids.com

Eating Disorders Referral

EDReferral is a comprehensive and easy to search database of anorexia, bulimia, and other eating disorder treatment professionals.
www.edreferral.com

Evaluation Report on Arkansas Legislative Act 1220 on Childhood Obesity

www.uams.edu/coph/reports/#Obesity

The Future of Children

Volume 16, Number 1, Spring 2006, The Role of Schools in Obesity Prevention, Mary Story, Karen M. Kaphingst, and Simone French.
www.futureofchildren.org/information2826/information_show.htm?doc_id=355544

International Size Acceptance Association

The mission of the International Size Acceptance Association (ISAA) is to promote size acceptance and fight size discrimination throughout the world by means of advocacy and visible, lawful actions.
www.size-acceptance.org/mission.html

MyPyramid

MyPyramid Plan offers you a personal eating plan with the foods and amounts that are right for you. **MyPyramid Tracker** offers a detailed assessment of your food intake and physical activity level. There is also a MyPyramid for kids tailored to the needs of school-age children and a MyPyramid Blast-off game to teach MyPyramid concepts in an entertaining format.
www.mypyramid.gov

National Dairy Council

Website for educators, parents, and school food service professionals. Provides fun and easy-to-use activities to teach students about nutritious foods and a healthy diet.
www.nutritionexplorations.com

The National Eating Disorders Association (NEDA)

NEDA is the largest not-for-profit organization in the United States working to prevent eating disorders and provide treatment referrals to those suffering from anorexia, bulimia and binge eating disorder and those concerned with body image and weight issues. It includes information for educators and coaches. Toll-free Information and Referral Helpline: (800) 931-2237
www.edap.org

President's Council on Physical Fitness and Sports

www.fitness.gov

President's Challenge Physical Activity and Fitness Awards Program

Provides a series of programs for all ages designed to improve activity level. Offers personal activity logs to track one's progress online and awards for reaching one's goals.
www.presidentschallenge.org

SHAPEDOWN

Weight management program for children and adolescents.
www.shapedown.com

Surgeon General's Public Health Priorities

Surgeon General's website includes speeches, testimony, and various resources related to obesity, diet and nutrition, physical activity, and fitness.
www.surgeongeneral.gov/publichealthpriorities.html

U.S. Dept. of Agriculture (USDA)

Food and Nutrition Information Center
www.nal.usda.gov/fnic

ARS Children's Nutrition Research Center at Baylor College of Medicine

Children's BMI and Percentile Graph Calculator Based on revised growth charts from the CDC, provides a "snapshot" of a child's weight and height for age, including BMI and BMI Percentile. It also plots the child's BMI Percentile on a growth chart, which is printable.
www.kidsnutrition.org

**U.S. Dept. of Health and Human Services,
Centers for Disease Control & Prevention
(CDC)**

BMI for Children and Teens

Provides information about and CDC links to obesity and overweight, 2000 CDC growth charts, growth chart training modules, software tools (Epi Info which contains NutStat, a program for calculating BMI and BMI-for-Age Percentiles and graphs results).

www.cdc.gov/growthcharts

**Body Mass Index: Nutrition and Weight
Resources**

www.cdc.gov/nccdphp/dnpa/bmi/resources.htm

Division of Adolescent and School Health

Website includes: 1) Program for Health Youth, with links to information and resources about nutrition and physical activity, the Youth Risk Behavior Surveillance System, and the School Health Policies and Programs Study, and 2) the eight components of a Coordinated School Health Program.

www.cdc.gov/HealthyYouth/index.htm

School Health Index

A self-assessment and planning tool that enables schools to identify strengths and weaknesses of health promotion policies and programs, develop an action plan for improving student health, and involve teachers, parents, students, and the community in improving School policies and progress.

www.cdc.gov/nccdphp/dash/SHI/index.htm

**U.S. Dept. of Health and Human Services,
National Institutes of Health**

**National Heart, Lung, and Blood Institute
Information Center**

Obesity Education Initiative

www.nhlbi.nih.gov/about/oei/index.htm

**National Institute of Diabetes and Digestive
and Kidney Diseases (NIDDK)**

Weight-Control Information Network, Helping Your Overweight Child

[http://win.niddk.nih.gov/publications/over_](http://win.niddk.nih.gov/publications/over_child.htm)
[child.htm](http://win.niddk.nih.gov/publications/over_child.htm)

**U.S. Dept. of Health and Human Services,
Health Resources and Services Administration**

Maternal and Child Health Bureau Growth Charts Training — A training site offering a set of self-directed, interactive training modules for health care professionals using the new pediatric growth charts in clinical and public health settings to assess growth.

<http://depts.washington.edu/growth>

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<http://dhfs.wisconsin.gov/health/physicalactivity/index.htm>
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www.actionforhealthykids.org

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"The Arkansas Assessment of Childhood and Adolescent Obesity"

Pennsylvania Department of Health,
"Procedures for the Growth Screening Program for Pennsylvania's School-age Population"

University of California Berkeley Center for Weight & Health
"Weighing the Risks and Benefits of BMI Reporting in the School Setting"

